

REDEFINITION OF *COPOSTIGMA* ENDERLEIN (PSOCOPTERA: PSOCIDAE)

By C. N. Smithers

The Australian Museum, 6-8 College Street, Sydney, N.S.W. 2000

Abstract

The genus *Copostigma* Enderlein is redefined. Four species of *Mecampsis* Enderlein from New Guinea and eight species of *Ptycta* Enderlein from Fiji and one from Tonga are transferred to *Copostigma*.

Introduction

Increases in the number of species of Psocoptera described in the past two decades have resulted in the limits of some genera becoming somewhat obscure. This is particularly so in a group of genera of the Psocidae which Badonnel (1967) referred to as the *Copostigma*-*Clematostigma*-*Ptycta*-*Maheella* complex. These, and some related genera, such as *Mecampsis* Enderlein were originally defined on the basis of a few venational features and subsequent allocation of species to them has become increasingly difficult. Part of the problem of recognizing these genera was solved by the redefinition of *Clematostigma* Enderlein (Smithers 1983), but the definition of *Copostigma* Enderlein remained a problem. The type species, *C. dorsopunctatum* Enderlein, was based on a single New Guinea specimen which has been destroyed by fire. Professor I. W. B. Thornton is at present studying *Ptycta* Enderlein and a redefinition of *Copostigma* would go a long way towards preventing further confusion in this group of genera.

Data and Discussion

Mecampsis and *Copostigma* were both defined as having a crossvein between veins Rs and M in the fore wing and a spurvein arising from the hind angle of the pterostigma. In *Copostigma* the first section of Cu_{1a} is shorter than the second and at an angle to it whereas in *Mecampsis* it is longer and in a straight line with it. Smithers and Thornton (1981) when dealing with the Psocidae of New Guinea, described and referred four species to *Mecampsis*. These species have a distinct Rs-M crossvein but the pterostigmal spurvein is variable and there is a slight angle between the two basal sections of Cu_{1a} . Thornton (1981) when dealing with the Psocidae of Fiji placed eight species with similar features in *Ptycta*. He pointed out that the Rs-M crossvein was an unusual feature in *Ptycta* but was present in all Fijian species except *P. bebea* Thornton. One species from Tonga (Thornton 1981a) also has an Rs-M crossvein.

The pterostigmal spurvein is frequently a variable character in the Psocoptera; even intraspecific variation is common. Judging by the illustration of the type specimen of *C. dorsopunctatum* it appears to have been well developed as was the Rs-M crossvein (Enderlein 1903, pl. iv, fig. 17b). In the Fijian, Tongan and New Guinea species referred to above the Rs-M crossvein is constant and well developed. As was usual at the time of its description, details were not given of the genitalia of *C. dorsopunctatum*.

In all four New Guinea species described in *Mecampsis* the male paraprocts have an unusual, strongly developed, frequently rugose basal lobe on the upper side (Smithers and Thornton 1981 figs 115, 119, 125) and the females have the sclerification of the ninth sternite in the form of a large broad plate (*loc. cit.* fig. 106). Thornton (1981) did not describe nor illustrate male paraprocts or female ninth sternites of the Fijian species but he has now kindly provided me with drawings by Mrs J. Browning which show that the Fijian species with an Rs-M crossvein agree with the New Guinea species in these other features. Also, the first section of Cu_{1a} is in all cases shorter than the second and at an angle to it.

This combination of venational, paraproct and genitalic features unites the species from New Guinea, Tonga, those from Fiji and others at present being studied from the Melanesian areas in a compact, recognizable generic group to which the name *Copostigma* must be applied.

Copostigma can now be redefined so as to permit comparison with the genera of the complex as previously set out (Smithers 1983).

Redefinition of *Copostigma*

Psocinae in which the pterostigma is broad, concave basad of the hind angle; pterostigmal spurvein usually present, variable; Rs and M joined by a distinct crossvein; first section of Cu_{1a} shorter than second and at an angle to it; male paraprocts with a distinct basal lobe on upper side; ninth sternite of female with a large, broad sclerotized plate. Type species: *D. dorsopunctatum* Enderlein. The only other currently included species is *C. trimaculatum* (Hagan) of which genitalia have not been described. To these are now added the following species, all in *new combination*: *C. montanum* (Sm. and Th.), *C. major* (Sm. and Th.), *C. bilineata* (Sm. and Th.) and *C. hyalinum* (Sm. and Th.) from New Guinea, *C. collina* (Th.), *C. dispersa* (Th.), *C. mara* (Th.), *C. natewa* (Th.), *C. tora* (Th.), *C. sitivanum* (Th.), *C. vitiensis* (Karny) and *C. marosticum* (Th.) from Fiji and *C. insularum* (Th.) from Tonga.

There is no need to modify the key to genera provided in Smithers (1983) with which *Copostigma* can still be satisfactorily keyed out.

The zoogeography of the Psocidae in the south western Pacific will be dealt with more fully elsewhere, but it can be noted here that *Copostigma* appears to be a genus which occurs only from New Guinea, through the Melanesian arcs to Fiji.

References

- Badonnel, A., 1967. Insectes Psocopteres. *Faune de Madagascar* 23: 1-238, figs 1-496.
 Enderlein, G., 1903. Die Copeognathen des indo-australischen faunengebietes. *Ann. hist.-nat. Mus. hung.* 1: 179-344, 12 figs, pls. ii-xiv.
 Smithers, C. N., 1983. A reappraisal of *Clematostigma* Enderlein, with notes on related genera (Psocoptera: Psocidae). *Aust. ent. Mag.* 9(5): 71-79, 8 figs.
 Smithers, C. N. and Thornton, I. W. B., 1981. The Psocidae (Insecta: Psocoptera) of New Guinea, including a new coleopteriform genus from high on Mount Wilhelm. *Aust. J. Zool.* 29: 921-969, 125 figs.
 Thornton, I. W. B., 1981. Psocoptera of the Fiji Islands. *Pacific Insects Monographs* 37: 1-105, 295 figs.
 Thornton, I. W. B., 1981a. Psocoptera of the Tongan Archipelago. *Pacific Insects Monographs* 37: 106-135, 55 figs.